



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,622	09/28/2001	Toshiki Nanya	214503US0	1917

22850 7590 05/19/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 05/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,622

Applicant(s)

NANYA ET AL.

Examiner

Christopher D RoDee

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 20-29 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12 & 16.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

The references discussed on page 11 of the recent response (3/7/03) have been considered except for 09/667717 (US Patent 6,360,068) because no copy of the document has been provided. 37 CFR 1.98(a)(2)(i).

The Information Disclosure Statements, including those submitted after the last Office action, cumulatively listing over 100 separate items have been reviewed. All citations have been considered except for application 09/667717 because no copy of this application was submitted as required by 37 CFR 1.98(a)(2)(i). Additionally, numerous references cited appear to be unrelated to the claimed inventions.

The portions cited (i.e. only claims, Abstract, and Drawings) of applications 10/102867, 08/985368, 09/985347, 09/903718, 09/985375, 09/985348, and 10/176578 show that the applications are directed to photoreceptors (i.e., layered articles) that cannot serve as toner (i.e., a composition capable developing electrostatic latent images).

Applications 09/692430, 10/086683, and 09/709795, (cited portions) and US Patent 6,406,826 are directed to the structure of carrier particles, which do not appear to be able to serve as toner.

Numerous other cited portions of applications and patents are also directed to compositions, articles, devices, or methods that do not appear to be pertinent to the instant claims or to toners that do not appear to have features pertinent to the instant claims. It is unclear why these applications and patents were cited because they do not appear to be "material to patentability" of the claimed invention (37 CFR 1.56).

Art Unit: 1756

MPEP 2004, particularly section (13), sets forth guidelines to aid applicants in their duty of disclosure. In this section it states,

"It is desirable to avoid the submission of long lists of documents if it can be avoided. Eliminate clearly irrelevant and marginally pertinent cumulative information. If a long list is submitted, highlight those documents which have been specifically brought to applicant's attention and/or are known to be of most significance. See *Penn Yan Boats, Inc. v. Sea Lark Boats, Inc.*, 359 F. Supp. 948, 175 USPQ 260 (S.D. Fla. 1972), *aff'd*, 479 F.2d 1338, 178 USPQ 577 (5th Cir. 1973), *cert. denied*, 414 U.S. 874 (1974)."

In an effort to clarify the "material" nature of these references to the patentability of the elected claims applicants are *requested* to specify why each of the above noted applications or patents was cited and to highlight those documents of most significance to the instant claims, particularly to the claims directed to the elected invention.

Election/Restrictions

Applicant's election with traverse of group I, claims 1-19, in Paper No. 18 is acknowledged. The traversal is on the ground(s) that the Examiner has not shown that the alternative method proposed is different from that claimed. This is not found persuasive because the proposed method adheres (i.e., fixes) the toner to a dielectric support where the latent image is originally formed. The instant claims require the transfer of the image to a different support by a transfer step. Thus additional steps are carried out in the claimed method that are not permitted in the proposed method. Applicants have not stated why the alternative method is not distinct from the method claimed. If applicants believe the proposed process and the claimed process to be obvious variants applicants should clearly state this in the response.

Art Unit: 1756

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 and 26-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claims have been amended to specify that the monomer (3) is at least one non-fluorinated acrylate monomer, non-fluorinated methacrylate monomer, or mixtures thereof. Basis for this amendment is asserted to be present in the specification in Synthesis Example 8 where a charge control agent resin is formed and toner T15 where this charge control agent resin is used in the toner. Applicants take the position that this disclosure shows that non-fluorinated acrylate monomers and non-fluorinated methacrylate monomers are excluded from the resin's component (3). Explicit basis for an amendment need not be present as discussed by applicants throughout the response.

The Examiner has carefully considered applicant's remarks in light of the specification disclosure and the amendments to the instant claims. The charge control agent resin of Synthesis Example 8 is formed from a sodium styrene sulfonate, nitrophenyl maleimide, and perfluoroalkyl ethyl methacrylate (p. 48). In Comparative Example 3 where Toner T15 is

Art Unit: 1756

prepared, this resin is stated as not comprising acrylate monomers and/or methacrylate monomers. Although the perfluoroalkyl ethyl methacrylate is obviously a methacrylate monomer it is understood to be outside the scope of the invention.

The resin of Synthesis Example 8 is the sole comparative example pertinent to the amendment. This passage only discloses perfluoroalkyl ethyl methacrylate. While the Examiner agrees that the artisan would understand that perfluoroalkyl groups are excluded from the invention's acrylates and methacrylates, the disclosure does not show possession of excluding acrylates and methacrylates having less than full fluorination on the alkyl (i.e., perfluoroalkyl) or of excluding fluorine-containing groups that are not alkyl. Each of these latter options are included within the scope of the claims but are not taught by the specification.

The specification does teach exclusion of perfluoroalkyl methacrylates and perfluoroalkyl acrylates, but not all fluorinated methacrylates and fluorinated acrylates as claimed.

The specification also does not teach using a mixture or combination of acrylate monomers for the resin's component (3) or a mixture of methacrylate monomers for the resin's component (3). If basis is present in the specification for such mixtures applicants are asked to refer the Examiner to the appropriate page and line. See this language in amended claim 1 and new claims 28 and 29.

✓ Claim 3 has been amended to state that the electron withdrawing groups may be substituted with chlorine or intro groups. Although the specification does state that the noted monomers may be substituted with chlorine or intro groups, the specification does not specify that the substitution is on the electron withdrawing groups.

Art Unit: 1756

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 10, 11, 13, 14, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi *et al.* in US Patent 5,728,501.

Nakanishi was discussed in the prior Office action. The instant claims have been amended to specify that the negative charge control agent is a resin and that the acrylate and methacrylate monomer required as component (3) of the resin is at least one non-fluorinated acrylate monomer, non-fluorinated methacrylate monomer, or mixtures thereof. Applicants provide detailed traversal of this reference stating that it does not disclose the charge control agent of the instant claims because of the exclusion of fluorinated (meth)acrylates. The Examiner does not agree with this position for the reasons that follow.

Nakanishi teaches a charge control agent within the scope of the instant claims. The charge control agent in Nakanishi is a resin (i.e., a polymer) because it is formed by a polymerization reaction to form a copolymer (Abstract). As noted in the prior Office action, the charge control agent polymer contains monomers having aromatic ring-containing monomers that are substituted with withdrawing groups such as halogen, nitro, or cyano (monomer (1): col. 2, l. 55-59; col. 3, l. 1-23). Other monomers for use in preparation of the polymer include sulfonic acid-containing monomers (monomer (2-1): col. 3, l. 28-33, l. 40, l. 46-54). The reference prefers perfluoroalkyl acrylate monomers (3-1) as additional effective comonomers (see copolymers (16) - (20)). However, the reference teaches that silicone-containing monomers may be used as an alternative to the perfluoroalkyl monomers (monomer (3-2): col. 3, l. 28-33). Suitable silicone group-containing monomers include esters of (meth)acrylic acids

Art Unit: 1756

terminated with hydroxy group-modified silicon oil (col. 4, l. 22-26). These monomers are non-fluorinated acrylate and non-fluorinated methacrylate monomers.

The other features of Nakanishi noted on pages 5 through 7 of the last Office action are still applicable with specific reference to the binder resin, colorants, and component dispersion characteristics of the toner. Particularly, polyesters (col. 11, l. 18-19) and epoxy resins formed from polyols (col. 11, l. 20-22) are disclosed as the binder resin (see new claims 26 and 27). Nakanishi also discloses charge control resin domain sizes of from 0.05 to 2 microns and suggests weight-average molecular weights of from 200 to 200,000 for the charge control resin.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to prepare the charge control agent of Nakanishi with an ester of (meth)acrylic acids terminated with hydroxy group-modified silicon oil, an aromatic ring-containing monomer substituted with withdrawing groups such as halogen, nitro, or cyano, and a sulfonic acid-containing monomer because the reference teaches that mixture of monomers (2) and (3-2) are effectively copolymerized with monomer (1) (col. 3, l. 32-33) and the reference exemplifies combinations of the monomers (1), (2), and (3) in compounds (16) - (20). The substitution of a monomer (3-2) for the monomer (3-1) in the compounds (16) - (20) would also have been obvious because the reference teaches that monomers (3-1) and (3-2) are alternatives for each other. Given the totality of the disclosure there is ample motivation to combine the monomer units as proposed by the Examiner to make an effective charge control agent.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use resin domain sizes within the scope of those sizes disclosed by the reference because the artisan would expect such sizes to effectively permit dispersibility as individual domains while providing the desired charging characteristics to the toner. The artisan

Art Unit: 1756

would have been expected to use sizes at a specifically disclosed endpoint (e.g., 0.05 microns) to be particularly effective because the artisan specifically considered such a size. The artisan would also have been expected to prepare the charge control resin with a molecular weight within the values disclosed by the reference in order to obtain the proper dispersibility of the resin components.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi *et al.* in US Patent 5,728,501 in view of *Handbook of Imaging Materials* to Diamond, pp. 162-165 & 213-216.

Nakanishi was described above and the reasons for holding of obviousness for the claimed toner are applicable here. The reference does not specifically disclose a container for the one and two component developers. The reference also does not disclose a resin coating for the carrier particles.

Diamond states that resin coatings are typically applied to carrier particles to enhance toner charging and to remove adhesion forces of the toner on the carrier surface (p. 213). Diamond also states that the majority of carriers in production today are coated (p. 214).

The Diamond reference also shows containers for one-component developers (Fig. 4.4) and two-component developers (Fig. 4.2). These components are associated with a photoreceptor in an electrophotographic apparatus.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to coat the carrier particles of Nakanishi because Diamond states that the majority of carrier particles are coated to provide necessary triboelectric charge to the toner while avoiding "sticking" of the toner to the carrier. It would also have been obvious to the artisan to place the toner or combination of toner and carrier in a container, such as one

Art Unit: 1756

associated with an imaging apparatus, because this is conventional, as shown by Diamond, in order to automate the production of images using a developing device.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-17, 26, 28, and 29 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 & 45-83 of copending Application No. 10/114056. Although the conflicting claims are not identical, they are not patentably distinct from each other because the toner of the copending claims has a specific polyester resin and the charge control agent has the same components as claimed, particularly sulfonate groups and electron absorbing groups. The claim to an acrylic ester monomer or a methacrylic ester monomer for the charge control agent would suggest simple (meth)acrylic ester monomers such as alkyl (meth)acrylates (e.g., methylmethacrylate) to the skilled artisan. The artisan would expect the charge control agent of the copending application inherently to be a negative charging component because it contains the sulfonic acid group and electron withdrawing group, which are the same as specified in the instant claims for producing a negative charge control agent.

Art Unit: 1756

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 703 308-2465. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703 308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Art Unit: 1756

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

cdr
May 16, 2003



CHRISTOPHER RODEE
PRIMARY EXAMINER